

Section 7 Regulation/Institutional Considerations

7.1 Introduction	7-1
7.2 Setting	7-1
7.2.1 Regulation	7-1
7.2.2 Local Institutions and Organizations	7-2
7.3 Policy Issues and Recommendations	7-3
7.3.1 Water Quality Monitoring	7-3
7.3.2 Reserved Water Rights	7-4
7.4 Problems and Needs	7-4
7.5 Water Rights Regulation	7-5
7.6 Water Quality Control	7-6
7.7 Drinking Water Regulation	7-7
7.8 Environmental Considerations	7-7
7.9 Dam Safety	7-8
7.10 References	7-9

7

Regulation/ Institutional Considerations

7.1 Introduction

This section discusses the various entities responsible for water regulation in the Kanab Creek/Virgin River Basin. It also discusses the major related problems and issues.

Two state agencies are primarily responsible for water regulation. They are the Division of Water Rights and the Department of Environmental Quality. The Division of Water Rights, under the direction of the State Engineer, regulates water allocation and distribution according to state water law. Water quality is regulated at the state level by the Department of Environmental Quality through two agencies, the Division of Water Quality and the Division of Drinking Water. These agencies operate in accordance with the Utah Water Quality Act and the Utah Safe Drinking Water Act. Water quality is also regulated by provisions of various federal acts. The Division of Water Resources regulates the cloud seeding program (See Section 9 for details).

The functions of these agencies are described in the *State Water Plan*, Sections 7, Regulation/Institutional Considerations; 11, Drinking Water Supplies Development

Regulation of water resources use is necessary to manage conflicts and to provide for orderly future planning and development. This includes consideration of water rights, water quality and environmental concerns.

and Management and 12, Water Pollution Control.⁹

7.2 Setting

Water regulation is generally performed under the direction of state agencies. Local public and private institutions and entities usually manage and operate the water systems at the basin level.

7.2.1 Regulation

Water distribution is based on the doctrine of prior appropriation under Utah water law. Water law is administered by the State Engineer who has a representative, the regional engineer, located in Cedar City, Utah.

The court order mandating the adjudication of the water rights in the Virgin River Basin was signed on April 18, 1980. Since that time, mapping of the area for water use is nearly complete and thousands of water user's claims have been taken. The Proposed Determination of Water Rights for the Santa Clara River-Beaver Dam Wash Division, Area 81, Book No.1, was distributed in the summer of 1989. A similar document for the East Fork Virgin River Division, Area 81, Book No. 2, was distributed in 1992. The Proposed Determination of Water Rights for the Kanab Creek and Johnson Creek Division, Code No.85, Book No. 1, was distributed in 1974. The Utah Division of Water Rights has indicated, given the nature and number of claims in the Virgin River adjudication, it is difficult to predict when a decree will be entered by the court.

The quality of water is determined under standards for allowable contaminant levels according to the use designations. The use designations and the standards are published by Utah Department of Environmental Quality in the *Standards of Quality for Waters of the State*. The Utah Water Quality Board implements the regulations, policies and activities necessary to control water quality. This is carried out through the Division of Water Quality.

The Utah Safe Drinking Water Board is responsible for assuring a safe water supply for domestic culinary uses. It regulates any system defined as a public water supply. This may be publicly or privately owned. The Safe Drinking Water Board has adopted State of Utah Public Drinking Water Regulations to help assure pure drinking water. There is also a Drinking Water's

Source Protection Program. This includes monitoring delivered drinking water quality as well as water source protection. These responsibilities are carried out by the Division of Drinking Water.

7.2.2 Local Institutions and Organizations

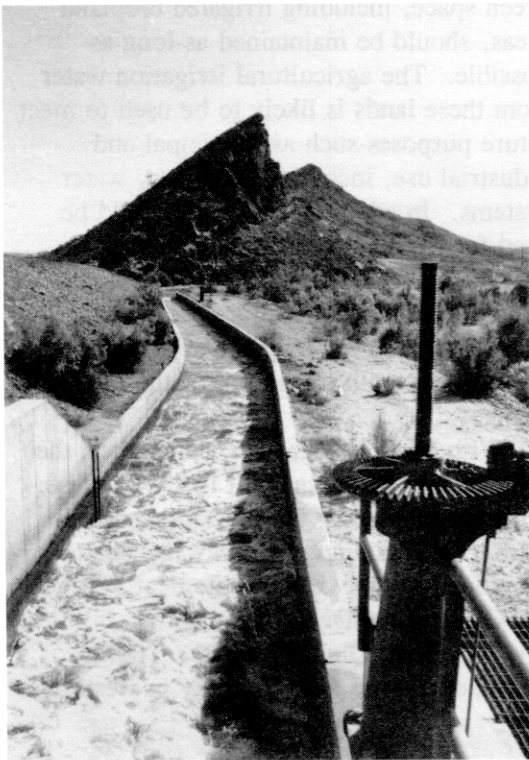
Most of the water development in Utah has been completed under the auspices of local institutions, entities and organizations. These entities are all formed under specific enabling legislation. Types of these entities are described below.

Water Conservancy Districts - These are created under Title 17A-2-1401 of the Utah Code. They are established by the District Court in response to a formal petition, and are governed by a board of directors appointed by the county commission when the district consists of a single county. Water conservancy districts have very broad powers, including that of constructing and operating water systems, levying taxes and contracting with government entities. These districts may include incorporated and unincorporated areas. The districts in the basin are the Kane County Water Conservancy District and the Washington County Water Conservancy District with offices in Kanab and St. George, respectively. These districts cover all of Kane and Washington counties.

Mutual Irrigation Companies - These are the most common water development and management entities in the basin. They are formed under the corporation code, and the majority of them are non-profit. In general, stockholders are granted the right to a quantity of water proportional to the number of shares they hold, and assessments are levied similarly. Over 33 mutual

irrigation companies are in the Virgin River drainage; two are in the Kanab Creek drainage.

Water Companies - These are entities formed by cities, towns and other groups to provide water to residents and subscribers. Municipalities can form corporations to deliver water inside of all or any part of a city boundary. Counties have the same authority in unincorporated areas. The Utah Code and local ordinances provide the legal framework for water company operation. There are about 30 water companies in the basin. Local entities may pass ordinances regulating water use.² Some organizations, such as special service districts, have authority to levy taxes. Private water companies operated for profit are regulated by the Division of Public Utilities.



Water User Associations - These organizations are groups formed to deliver water for various purposes. They are often informal groups that can also be incorporated under Utah law. There are nearly 20 such groups in the basin.

Other - Three other entities deliver water to specific areas. They are 1) the Shivwits Band of Paiute Indian Tribe used for domestic use and cropland irrigation, 2) the Utah Division of Parks and Recreation at Gunlock, Coral Pink Sand Dunes, and Snow Canyon State Parks for drinking water and miscellaneous use and 3) the National Park Service at Zions National Park for culinary and other miscellaneous uses.

7.3 Policy Issues and Recommendations

Two issues regarding water regulations and related institutional considerations that need resolution are water quality monitoring and reserved water rights.

7.3.1 Water Quality Monitoring

Issue - Additional water quality data is needed.

Discussion- Future demands for conversion of water use from one purpose to another requires accurate knowledge of water quality. Monitoring is already carried out by the Division of Water Quality, Bureau of Land Management, Forest Service and U. S. Geological Survey. More emphasis should be placed on seasonal and episodic event sampling. The impact of non-point source pollution needs to be better evaluated. There is a continued need to measure the water quality at strategic locations throughout the basin.

Recommendation - The U.S. Geological Survey; Utah Departments of Natural Resources, Agriculture and

Environmental Quality and local government entities should establish water quality monitoring stations at strategic locations to develop a better understanding of water quality. Event monitoring should also be carried out where appropriate.

7.3.2 Reserved Water Rights

Issue - The United States has filed claims for reserved water rights based on the date of creation of the federal reservation for an undetermined amount of water. These need to be resolved.

Discussion - The United States has filed claims on behalf of the Bureau of Land Management (BLM), the Forest Service, Zion National Park and the Shivwits Band of the Paiute Indian Tribe. The Solicitor of the Department of Interior and the U.S. Attorney General have jointly taken the position that reserved rights will not be claimed for existing wilderness areas.⁶

The claims filed by the BLM are primarily based on state water rights; however, the majority of the claims filed by the Forest Service, Park Service and the Shivwits Indians are reserved rights claims. Among the reserved water claims are 1) instream channel maintenance and fisheries maintenance flows by the Forest Service, 2) all surface and groundwater within Zion National Park which is necessary to fulfill the purposes of the national park and 3) a claim for 11,355 acre-feet annually to fulfill the purposes of the Shivwits Indian Reservation.

Recommendation - The Division of Water Rights should continue to actively negotiate with the appropriate parties to resolve these claims under state water law. If agreement cannot be reached, the United States should be served and their claims

resolved through the legal framework provided under adjudication procedures.

7.4 Problems and Needs

More information is needed in the Beaver Dam Wash drainage to determine the quantity and quality of the water resources in this area. With the increasing demand for water in this drainage, from within the state and out-of-state, it is imperative to obtain data on the surface water and groundwater supplies.

As future growth continues in the basin, some of the new development from urbanization is likely to displace presently irrigated farm land. Efforts should be made to maintain presently irrigated land by recommending future urban development in non-irrigated areas. Preservation of open green space, including irrigated cropland areas, should be maintained as long as possible. The agricultural irrigation water from these lands is likely to be used to meet future purposes such as municipal and industrial use, including secondary water systems. In addition, the water could be used for instream flows, supplemental irrigation in other water short areas and irrigation of new agricultural cropland. There is a need for long-range planning to provide a smooth transition for these use changes.

With continued growth, demand on the groundwater resources will likely increase. A recharge map for the Navajo sandstone aquifer in Washington County has been developed by the U. S. Geological Survey (USGS) and the Department of Environmental Quality (DEQ). This is shown on Figure 9-2. A study in western

Kane County investigated groundwater aquifers. This was a cooperative study by USGS, DEQ and local organizations including Kane County, Kanab City, Garkane Power Association, Inc. and Five County Association of Governments. Local protection planning for this zone is essential if both future water quantity and quality are to be ensured.

Knowing how much and where groundwater can be developed is a problem. Additional studies are needed to make this determination, particularly in the Beaver Dam Wash drainage. Study needs in other areas should be assessed and carried out where warranted.

7.5 Water Rights Regulation

The State Engineer is responsible for determining whether there is unappropriated water and if additional applications will be granted. This is accomplished through data analysis and consideration of public input.

Before approving an application to appropriate water, the State Engineer must find 1) if there is unappropriated water in the proposed source, 2) the proposed use will not impair existing rights, 3) the proposed plan is physically and economically feasible, 4) the applicant has the financial ability to complete the proposed works and 5) the application was filed in good faith and not for purposes of speculation or monopoly. The State Engineer shall withhold action on an application if the application is determined to interfere

with a more beneficial use of water or prove detrimental to the public welfare or the natural stream environment.

Utah water law allows changes in the point of diversion, place of use and/or nature of use of an existing water right. To accomplish such a change, the water user must file a change application with the State Engineer. The approval or rejection of a change application depends largely on whether or not the proposed change will impair other vested rights; however, compensation can be made, or conflicting rights may be acquired.

In the appropriation process, the State Engineer analyzes the available data and, in most cases, conducts a public meeting to present findings and receive input before adopting a final policy regarding future appropriation and administration of water within an area. Through his regulatory authority, the State Engineer influences water management by establishing diversion



requirements for various uses and policies on water administration for surface water and groundwater supplies.

The Division of Water Rights is responsible for a number of other functions which include 1) distribution of water in accordance with established water rights, 2) adjudication of water rights under an order of a state district court, 3) approval of plans and specifications for the construction of dams and inspection of existing structures for safety, 4) licensing and regulating the activities of water well drillers, 5) regulation of geothermal development, 6) authority to control streamflow and reservoir storage or releases during a flooding emergency and 7) regulation of stream channel alteration activities.

7.6 Water Quality Control

The discharge of pollutants is regulated by the Utah Water Quality Act (UWQA). The Utah Water Quality Board (UWQB) implements the rules, regulations, policies and continuing planning processes necessary to prevent, control and abate new or existing water pollution, including surface water and groundwater. This is carried out through the Utah Department of Environmental Quality, Division of Water Quality.

Utah Water Quality Rules developed under authority of *Utah Code Annotated (UCA)* 26-11-1 through 20, 1953, amended, have been implemented by the UWQB under authority of the UWQA. They are described in Section 7 of the *State Water Plan*.¹⁰

Water quality certification by the state is under Section 401 of the Federal Water Pollution Control Act, 1977, as amended (Clean Water Act, CWA). This act states that any applicant for a federal license or permit to conduct any activity including, but

not limited to, the construction or operation of facilities which may result in discharge into waters and/or adjacent wetlands of the United States, shall provide the licensing or permitting agency a certification from the state in which the discharge originates or will originate, that any such discharge will comply with applicable state water quality standards and applicable provisions of the Clean Water Act.

In addition, Ground Water Protection Regulations were adopted and are now enforced by the UWQB. These regulations are the building block for a formal program to protect the present and probable future beneficial uses of groundwater in Utah. The three main regulatory concepts are 1) to prohibit the reduction of groundwater quality, 2) to prevent groundwater contamination rather than cleanup after the fact and 3) to provide protection based on the different existing groundwater quality. Five significant administrative components are 1) groundwater quality standards, 2) groundwater classification, 3) groundwater protection levels, 4) aquifer classification procedures and (5) groundwater discharge permit system. Statutory authority for the regulations is contained in Chapter 19-5 of the *Utah Code Annotated*, authorizing the Water Quality Board.

These regulations contain a groundwater discharge permitting system which will provide the basic means for controlling activities that may effect groundwater quality. A groundwater discharge permit will be required if, under normal circumstances, there may be a release either directly or indirectly to groundwater. Owners of existing facilities will not be obligated to apply for a groundwater discharge permit immediately. An existing

facility is defined as a facility or activity that was in operation or under construction before February 10, 1990. Owners of these facilities should have notified the Executive Secretary of the UWQB of the nature and location of their discharge. The regulations contain provision for a permit by rule for certain facilities or activities. Many operations, which pose little or no threat to groundwater quality or are already adequately regulated by other agencies, are automatically extended a permit and need not go through the formal permitting requirements. Therefore, facilities qualifying according to the provisions of Section R448-6-6.2 will administratively be extended a groundwater discharge permit (Permit by Rule). However, these operations are not exempt from the applicable class TDS limits or groundwater quality standards.

The authority for CWA, Section 401 certification, commonly known as 401 Water Quality Certification, is delegated to and implemented administratively through the Utah Water Quality Board by the Division of Water Quality. The Clean Water Act provides the focus for and the delegation of responsibility and authority to the U.S. Environmental Protection agency (EPA) to develop and implement its provisions. Whether or not EPA administers a CWA program directly within a state or indirectly by delegation to a state, EPA retains the oversight role necessary to insure compliance with all rules, regulations and policies.

7.7 Drinking Water Regulation

The Safe Drinking Water Board is empowered to adopt and enforce rules establishing standards prescribing maximum contaminant levels in public water systems. This authority is given by Title 26, Chapter

12, Section 5 of the *Utah Code Annotated, 1953*. The rules and regulations setting drinking water standards were adopted after public hearings. These standards govern bacteriologic quality, inorganic chemical quality, radiologic quality, organic chemical quality and turbidity. Standards are also set for monitoring frequency and procedures.

The Division of Drinking Water serves as staff for the Safe Drinking Water Board to assure compliance with the standards. At the local level, considerable reliance is placed on public water supply operators. Those operating systems serving over 800 people are currently required to have state certification. Water systems serving fewer than 800 people will need to have a certified operator if the water system has some sort of treatment facility in place.

7.8 Environmental Considerations

Water is often viewed as a commodity for people's use with little thought given to other purposes of the hydrologic cycle. Many recreational opportunities in Utah involve water. Adequate quantity and quality of water is crucial to maintaining healthy wildlife habitats and populations. This includes providing instream flows where prudent and possible and maintaining critical wetlands areas.

Providing instream flow as a beneficial use to maintain fish and wildlife populations, riparian vegetation and stream channels is widely recognized as important. The Utah legislature recognized this through recent legislation allowing purchase of instream flow water rights. Adequate water resources planning allows consideration of instream flow needs early in the design process so problems can be resolved before construction or operation of the project.

Wetlands are extremely important for groundwater recharge and discharge, flood storage and desynchronization, shoreline stabilization, sediment trapping, water purification and pollution control, food chain support, habitat for fish and wildlife and active and passive recreation. Stream channelization and draining and filling of wet areas can all impact wetlands.

Numerous potential sources of pollution may adversely affect the quality of groundwater. These sources include agriculture, on-site waste treatment systems, solid wastes, hazardous wastes, oil and gas exploration and production, mining, surface impoundments and urban runoff. The importance of groundwater as a resource should always be considered. Any activities should emphasize prevention, protection of recharge areas of the major aquifers and management of existing supplies to prevent degradation.

The Kanab Creek/Virgin River Basin has several environmentally sensitive areas. These areas are shown and discussed in the Resource Management Plans prepared by the Bureau of Land Management. These should be considered for protection and/or mitigation when water development is contemplated. For information on how communities can set up and carry out a "Local Aquifer Protection Management Plan" contact the Division of Water Quality.

7.9 Dam Safety

All dams in Utah, which store in excess of 20 acre-feet of water or may cause loss of life, are assigned a hazard rating. Hazard ratings are either high, moderate or low, thus determining the frequency of the inspection. High-hazard dams are inspected

yearly; moderate, every other year and low, every fifth year.

Following the inspection, a letter from the State Engineer suggests maintenance needs and requests specific repairs. The State Engineer may declare the dam unsafe and order it breached or drained. Efforts are always made to work with dam owners to schedule necessary actions.

The State Engineer has design standards which are outlined in a publication entitled *Rules and Regulations Governing Dam Safety in Utah*. Plans and specifications must be consistent with these standards. Dam safety personnel monitor construction to insure compliance with plans, specifications and design reports. Any problems are resolved before final approval is given. ■

7.10 References

1. Barnes, Robert P., Mack G. Croft. *Ground Water Protection Strategy for the State of Utah*. Utah Department of Health, Salt Lake City, Utah, 1986.
2. City of St. George. Ordinance No. 5.2. 1987, an ordinance making it unlawful to dispose of water apart from the land which it has historically benefitted or where it is found; prohibiting subsequent development where violation has occurred; requiring a permit for resale of water at a profit; imposing penalties. St. George, Utah, 1987.
3. Division of Water Resources. *State of Utah Water-1982*. Salt Lake City, Utah, 1982.
4. Division of Water Rights. *Rules and Regulations Governing Dam Safety in Utah*. Salt Lake City, Utah, 1982.
5. Federal Water Pollution Control Act. Public Law 92-500, 1972, as amended. Commonly referred to as the Clean Water Act.
6. Office of Attorney General. Letter of Opinion from Attorney General Edwin Meese III to Donald P. Hodel, Secretary, Department of the Interior, concerning reserved water rights for wilderness areas. Washington, D. C., July 28, 1988.
7. Safe Drinking Water Committee. *State of Utah Public Drinking Water Regulations, Part 1-Administrative Rules*. 5th Revision adopted February 1, 1986.
8. United States Department of Agriculture, Soil Conservation Service and Utah Department of Natural Resources, Division of Water Resources. *Virgin River Basin-Utah Cooperative Study*. Salt Lake City, Utah, 1990.
9. *Utah Code Annotated*. 1953, amended.
10. Utah Division of Water Resources. *Utah State Water Plan*. Salt Lake City, Utah, 1990.
11. Utah Wastewater Disposal Regulations, Parts I through VIII. Salt Lake City, Utah, 1988.
12. Utah Water Pollution Control Act. Title 26, Chapter 11, UCA, 1953, amend. Salt Lake City, Utah.
13. Utah Water Quality Board. *Utah Wastewater Disposal Regulations, Part 6 - Ground Water Quality Protection Regulations*. Salt Lake City, Utah, Adopted May 26, 1989.